REMARKS

The Office Action dated 04/25/2005 has been carefully reviewed.

The Office Action is a Notice of Non-Compliant Amendment and notes that the amendments to Pages 3 and 12 submitted with the response filed on 02/28/2005 were improper because a marked up copy of the page was not submitted.

Applicant wishes to leave Page 12 as it was initially filed, and therefore requests that the amendments submitted with the 02/28/2005 be disregarded.

Attached hereto is a marked up copy of Page 3.

It is believed that this application is now in condition to be forwarded to publications branch for publication.

Respectfully submitted,

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experienced by both diversity signals simultaneously. As a result, current diversity techniques do not seem to be adequate for mobile radio and other applications where radio waves propagate in close proximity to the ground and multipath signal reception is frequently encountered.

Other diversity communication techniques have been developed. See United States Patents 4,384,358, ~~5,291,579,~~ 5,379,324, 5,402,451, 5,465,271, 5,487,091, ~~5,541,963,~~ 5,566,364, 5,559,838 and 5,515,380. The patent 5,515,380 claims a method and a device which achieves significant performance improvements using diversity signal reception. The transmitted data are organized into blocks of bits. A block can be tens of bits long if parity bits are used or hundreds of bits long in case of FEC. Each block is augmented by adding error identification or correction bits, which upon signal reception and demodulation determine whether a given block contains errors. If a given block contains errors, the corresponding block received on the other diversity signal is hoped to be error free, in case of parity bit checking, or degraded to a lesser extent, in case of FEC block coding. The error-free, or better block, is selected to the output. However, when both diversity signals are affected by intermittent error bursts, the selection technique becomes ineffective. This is because parity bits ignore even number of errors and do not differentiate between single and a larger number of errors. FEC techniques use large data blocks which are likely to be similarly impaired by intermittent radio error bursts.

Fig. 1 illustrates a block diagram of a prior art space diversity communication system 10. The system includes a transmitter 12 which receives a baseband data input which modulates a carrier and transmits the modulated carrier from an antenna 14 through two separate transmission paths 16 and 18 to a pair of spaced apart antennae 20 and 22. These antennae are separated by a sufficient distance (e.g. a few wavelengths) to provide separate communication paths which are not subject to the same fading phenomena, such as Raleigh fading or other phenomena which degrade both transmissions 16 and 18 simultaneously. The received signal from antennas 20 and 22 is applied respectively to a pair of receivers 24 and 26. The output signals from the receivers 24 and 26 are applied to a combiner 28 which, as described above, functions to combine the output signals to produce a baseband output. The combiner 28 does not perform a comparison of respective streams of data units (e.g. bits) to choose and output individual data units as received from receivers 24 and 26 in circumstances where at least one difference in at least one data unit of a sequence of corresponding data units is identified and processing each data unit within the at least one difference of the sequence of corresponding data units to output data units having a higher probability of not being in error.

Fig. 2 illustrates a block diagram of a prior art frequency diversity system 30. A first transmitter 32 modulates a carrier of a first frequency with the baseband input and a second transmitter 34 modulates a carrier of a different frequency with the same baseband input. Antenna 36 broadcasts the respective modulated carriers 38 and 40 produced by transmitters 32 and 34 to a single antenna 42. The different frequency carriers are applied to receivers 44 and 46 which respectively process the data streams broadcast on carriers 38 and 40. Combiner 48 works in the same manner as combiner 28 of Fig. 2 and does not detect when at least one difference in at least one